

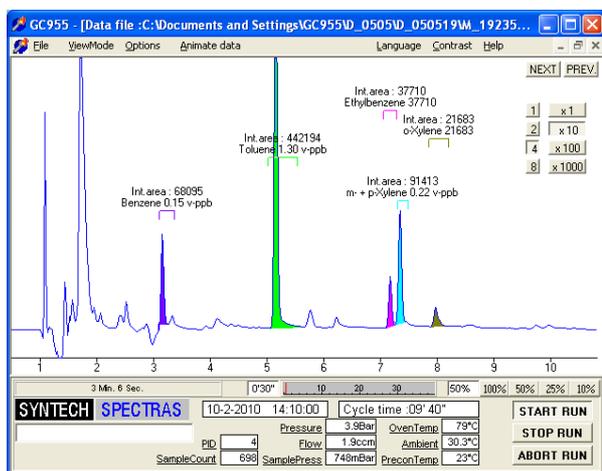
GC955

SYNTECH SPECTRAS BENZENE / BTEX ANALYSER



Monitoring of benzene, toluene, ethylbenzene, xylenes (BTEX) and other hydrocarbons in ambient air.

The Syntech Spectras GC955 series 600 BTEX analyser is built for the measurement of benzene, toluene and xylene isomers in ambient air. Due to the European legislation for monitoring benzene this is our most successful product. Over 1000 of these analysers are measuring BTEX all around the world. Of course this analyser is approved according to EN 14662-3.



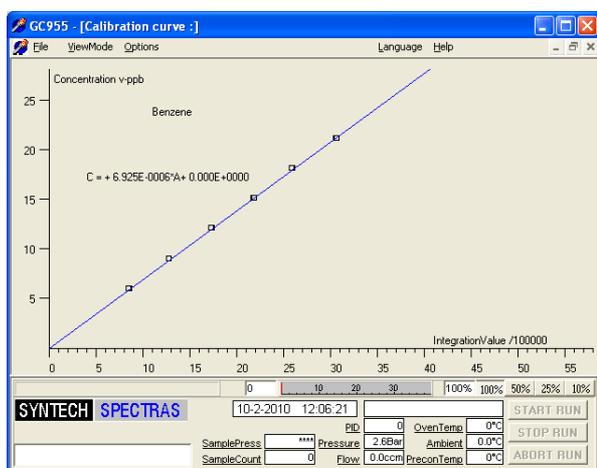
BTEX measurement in ambient air

Hydrocarbon selection

Benzene is a carcinogenic compound and it is harmful already in very low concentrations: there is no absolute safe concentration limit for benzene. By European regulations measurement of benzene in ambient air is now obligatory. The yearly mean value must be below 5 µg/m³. The concentration of benzene in ambient air varies from under 0.1 to above 100 micrograms per m³.

Benzene in ambient air is coming from evaporated fuel, either from gas filling stations or from cars. Furthermore, it is emitted by cars by burning fuel and from other burning processes like bio fuel heating or forest fires.

Toluene, Ethylbenzene and o-, m-, p-Xylene are standard included in the analyser configuration. This group of components belong to the most active ozone precursor VOC's and have many sources.



Six point calibration test up to 20 ppb

Syntech Spectras GC 955 series 601 BTEX analyser can measure up to 40 components.

With different settings and suitable calibration gas it is possible to measure up to 40 components, like octane, chloroethenes, trimethylbenzenes etc. in one 30 minute run. Data processing and communication is prepared for this.

The customer can also specify a list of components that have to be measured and Synspec can include those compounds in the setting of the system. The customer needs to buy the suitable calibration gas to check this and calibrate the system.

As an alternative it is possible to order a 611 ozone precursor (C6 to C12) system or a toxic system 615.

Details BTEX analyser

The instrument is a gas chromatograph with a built-in pre-concentration system. Hydrocarbons are pre-concentrated on Tenax GR, desorbed thermally and separated on an appropriate column, to reach optimal separation from interfering hydrocarbons. Alternative columns are available for special applications. Analysis is done by a photo ionization detector. This ensures a high specific sensitivity for benzene and aromatic hydrocarbons in general.

A standard industrial PC, running under Windows embedded is used.

The user-friendly software stores all the chromatograms on the hard disk and data can be interpreted easily with this intuitive software. Data can also be transferred by network and modem connection. Besides this, analogue and digital output options are available to communicate with other data logging systems using several data protocols.

Simple operation, good reliability and low maintenance cost are important to us. With a worldwide network of trained distributors the end-user can be sure that the analyser comes with an individualized training and that local support is available to help when needed. The Syntech Spectras GC955 consumes a small quantity nitrogen as carrier gas.

Preventive maintenance is only required once a year. For good data quality it is recommended to have a regular (automatic) calibration or validation. In the software an automatic multipoint validation/calibration is possible using calibration gas of one concentration per component by using different volumes of air passing over the pre-concentration trap.

The expected lifetime of the analyser is 10 years. Consumable parts are economically priced.

Syntech Spectras GC955 series 601 BTEX analyser

TECHNICAL DESCRIPTION

PID detector. Lowest detection level for benzene 0.1 µg/m³ (0.03 vppb). Range: up to 300 ppb. Included items: SERIES 600, column SY 1 15m, 0.32 mm ID, 1 µm film, cycle time 15 min, temp program 50 - 70 °C

CERTIFICATES

Approval for EN 14662-3, EN 15267-1, EN 15267-2, VDI-Richtlinie 4202 Blatt 1 and VDI-Richtlinie 4203 Blatt 3
CE approval for EMC conformity: EN 61010 incl. A1 and A2, EN 61000-6-2, EN 61000-6-3 and EN 61326

STANDARD CALIBRATION

Standard 4 point calibration provided for BTX in range 4 to 16 ppb.

EXTRA COMPOUNDS AVAILABLE

The software and hardware of the analyser is prepared to measure up to 40 hydrocarbons in the boiling point range from 60 °C up to 250 °C.

Ask Synspec for advise about calibration gas and peak window setting.

At an additional price Synspec can calibrate these already upon ordering.

REPEATABILITY

Typical <3% at 1 ppb (benzene, with capillary column)

GAS CONNECTIONS

Nitrogen: quality 5.0, 4 bar, 6 ml/min

DIMENSIONS

19" rack, 5 standard Height Units, depth 43 cm
(W 48,3 D 43 H 22 CM), WEIGHT 19 kg

HARDWARE and SOFTWARE INCLUDED

Industrial X86 based computer with Windows Embedded suitable for measuring and saving data up to 10 years.
Software for running the analyser as well as inspecting data on desktops.

COMMUNICATION

Direct control via touchscreen, keyboard or mouse. External data communication via RS232, analog and digital outputs, via TCP-IP.

Standard available protocols : ASCII terminal, Hessen, Gesytec and MODBUS, other protocols on demand

ELECTRICAL CONNECTIONS

230 V AC, 100 VA (115 V AC available) 50/60 Hz

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